CS-34816XG

16 Port SFP Gigabit + 8 Combo Gigabit Ports Managed L2/L3 Lite Fiber Optical Switch with 4 SFP+ 10Gigabit Ports

EAN Code : 4712757151459

Introduction

CERIO CS-3000 Series Model : CS-34816XG is the latest powerful high-performance L2/L3 Lite Fiber Optical Switch, It built-in web-browser management interface allows the administrator to manage and obtain detailed information of the local area network conveniently. **It supports up to 28 connection ports, including 16 of SPF Gigabit ports, 8 Combo Gigabit ports and 4 SFP+ 10Gigabit ports.** Provide multi-interface connection options, including high-speed and low-speed connections, to meet the needs of various equipment and network central office integration deployment environments.

The **CS-34816XG** is designed for office deployment and can be upgraded to 1U" chassis for server room installation. It is suitable for the installation environment of the optical fiber interface in the central office and the network environment that requires high-speed connection and powerful management functions. With 8-port Combo Gigabit ports for connecting Mini GBIC 1000Base-SX/LX fiber optic modules or RJ45 Gigabit ports which administrators can flexible deployment, 16-port SFP Gigabit ports for downlink connection for long-distance IP fiber optic equipment and 4-port high-speed SFP+ 10Gigabit uplink port full-duplex uplink and total bandwidth up to 80Gbps. With a bandwidth capability of up to 128Gbps enhancing the stability, also can use this 10G port for stacking to expand the overall optical fiber integration capability of the central office. In network deployment, CS-34816XG can improve network management and efficiency for your customers. Up to 28 fiber ports capacity is suitable for the deployment of optical fiber central office integrated terminal switches, perfectly solution of central office deployment in the application of long-distance IP surveillance cameras, Including high-speed connection and non-blocking packet data forwarding. It is usually used as an optical fiber integrated core switch for medium and large network systems, such as small and medium data centers, campus networks, enterprise networks, etc., and high-speed, long-distance optical fiber data transmission.

The **CS-34816XG** provides STP/ RSTP/MSTP functions and add ITU-T protocol industrial carrier grade G.8032 ERPS function to prevent broadcast storms. The management functions including IEEE 802.1Q Tag/Port Based VLAN functions, IEEE 802.1p-based/Port-based QoS bandwidth control, WRR flow control, IGMP Snooping, Link Aggregation Control Protocol (LACP). It can expand the interconnection between multiple devices into a backbone link channel, and at the same time control the bandwidth management of layer 2 and loop detection and prevention (Bandwidth control / Loop Detection) and other large-scale enterprise network security management. Using UTP cable to transmit network data and power to POE PD powered devices (such as AP, IP CAM, etc.), which can solve the limitation of the power outlet locations and offer the system relocation convenience.

Highlight Features

- Complying with IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-SX/LX, 802.3ae 10G SFP+ and IEEE 802.3az EEE standards.

- Supports 16 of SPF Gigabit ports, 8 Combo Gigabit ports and 4 SFP+ 10Gigabit ports.

- Supports Internal Bus Speed up to 128Gbps and the exchange rate over 95.24Mpps.

- Full/Half-Duplex capability on each TX port, Auto-learning networking configurations.

- Supports store & forward operation.

- Supports flow control: back pressure for Half-duplex and IEEE 802.3x for Full-duplex mode.

- Non-blocking & Non-head-of-line blocking full-wire speed forwarding.

- Supports TP interface Auto MDIX function for auto TX/RX swap.

- Automatic Source MAC Address Learning and Aging.

- Provides 10K Jumbo frames to improve network utilization of a large file transfers.

- Supports up to 16K MAC addresses and 12Mb Packet buffer.

- Supports Surge Protection 6KV on RJ45 to avoid the damage of the switch and connected devices.

- Supports VLAN and IEEE 802.1Q tag-base VLAN based on ports & VIDs; add/remove/modify tag.

- Supports Voice VLAN / MAC VLAN / Surveillance VLAN / Protocol VLAN and GVRP etc functions.

- Supports Broadcast / multicast / unknown unicast storm control.

- Provides IGMP snooping v1/v2/v3 function and supports MLD snooping and MVR functions.

- Supports IEEE 802.3ad Link Aggregation LACP function.

- Supports 802.1x protocol to support CHAP, EAP mode and port/MAC based network access control.

- Supports RADIUS/TACACS+ and AAA Certificate function.

- Supports MAC Address Table Management, It can grasp the MAC address which connected to the associated users and in case of set in or specified Port and VLAN group situation bind the MAC Address of the user's PC or network host device.

- Supports MAC/IPv4 and DHCP Client and IPv6 Internet Protocol, IPv6 Auto-configuration mechanism and DHCPv6 Client and other functions to facilitate the setting and management of IP addresses.

- Supports DoS (Denial of Service) Defense for enhanced network security.

- Firewall Dos supports POD, LAND, UDP Blat, TCP Blat, Null /X-Man Scan Attack, TCP SYN-FIN/SYN-RST Attack, Smurf Attack and other defense function.

- Supports Link Layer Discovery Protocol (LLDP) and LLDP-MED.

- Supports DHCP Snooping function to prevent access by unauthorized hosts and DHCP servers and supports DHCP Option 82 and Option82 Circuit ID provides additional security.

- Support setting the number of MAC users, IP and MAC binding and access control list (ACL), according to the limit of each port, which can be filtered by MAC and IP address.

- Supports QoS Quality of Service, Port-based QoS bandwidth management, 802.1q priority Tag based with 8 priority Queues and 8 Weights.

- Supports bandwidth control to set control traffic limits (inflow and outflow) for each port

- Supports Port Mirroring function.
- Supports IEEE 802.1D Spanning Tree Protocol (STP), including BPDU Filtering and BPDU guard functions and IEEE 802.1w Rapid Spanning Tree Protocol (RSTP), IEEE 802.1s Multiple Spanning Tree Protocol (MSTP).
- Supports Industrial Carrier Class ERPS（Ethernet Ring Protection Switching）helps to build a scalable Layer 2 converged network and achieve high reliability and network stability for service providers.
- RMON (Remote Network Monitoring) provides network administrators with the ability to select network-monitoring probes with features that meet their business network needs.
- Supports IPSG (IP Source Guard) provides source IP address filtering on a Layer 2 port to prevent a malicious host from impersonating a legitimate host by assuming the legitimate host's IP address.
- Supports UDLD (Unidirectional link detection), which can monitor the link status and prevent network problems.
- Support ACL (Access Control List), including MAC ACL, IPv4 ACL, IPv6 ACL and other security control functions.
- Supports local time and PC synchronization, also can manually setting. Supports SNTP time server and network time synchronization, automatically adjust the host and update, easy to understand the problem and restore.
- Supports Event Log, Alarm Log, Security Log, Network Log, and Protocol Log.
- Supports GUI display for monitoring network data status by port, traffic analysis by port, and device CPU and Memory loading for convenient administrative network analysis and management.
- Software management service supports setting Console / CLI / Telnet / SSH / HTTP /HTTPS/SNMP.
- Supports Simple Network Management Protocol (SNMPv1/v2c/v3) Web-based management interface.
- Support DHCP Server advanced functions include DHCP IP Pool, DHCP VLAN IP Address group setting, Client Static Binding management and table control. And display DHCP client status list.
- Supports DNS Client and DNS Server functions, can be set to operate as a DNS Server at the same time.
- Support IPv4/IPv6 Static Route and Loopback local loopback port function. Which can take port virtualization as the specified loopback address required by the Layer 3 router function. It can be quickly completed the advanced application of the layer3 network setting.
- Supports Layer3 function ARP（Address Resolution Protocol）used to map MAC addresses to IP addresses.
- Supports the Routing Information Protocol version 2 (RIPv2) to disseminate information through multicast, reducing resource consumption. This facilitates the identification of the complete state of the Layer3 link database.
- Supports Open Shortest Path First version 2 (OSPFv2). When there are changes in the network topology, it can be utilized to rapidly recalculate paths in large and heterogeneous inter-segment environments. This enables the swift identification of the complete state of the Layer 3 link database within a shorter timeframe.
- Supports the Virtual Router Redundancy Protocol version 2 (VRRPv2), enabling two gateways to function as redundant counterparts using a shared virtual IP gateway address. In the event of a failure in one of the gateway hosts, this setup ensures uninterrupted access to the Internet for local network users.

Hardware Overview
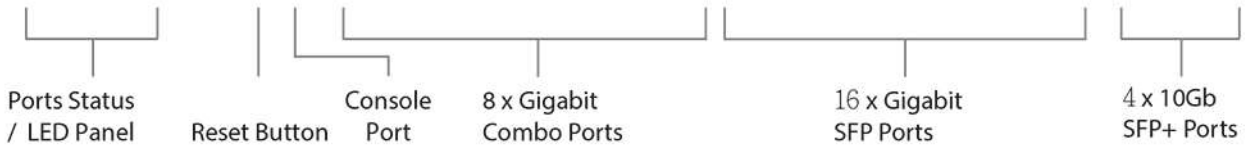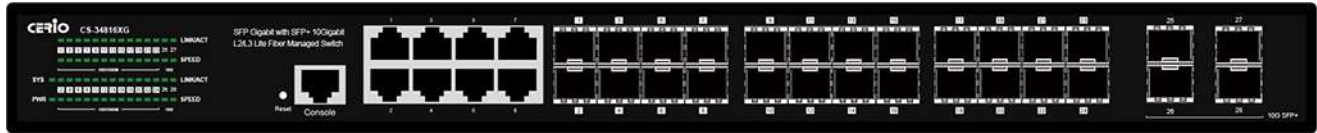
Standards & Hardware Specifications

Network Standards Conformance
IEEE 802.3 10Base-T
IEEE 802.3u 100Base-TX
IEEE 802.3ab 1000Base-T
IEEE 802.3z 1000Base-SX/LX
IEEE 802.3ae 10G SFP+
IEEE 802.3az EEE
IEEE 802.3x Flow Control
IEEE 802.1p QoS
IEEE 802.1Q VLAN Tag
IEEE 802.3ad Link Aggregation
IEEE 802.1x Authentication

Port Configuration
16 SFP Gigabit Ports
8 Combo Gigabit (RJ45/SFP) Ports
4 SFP+ 10Gigabit Ports
1 RJ45 Console Port

Hardware Reset
Reset button for returning to factory settings

Power Switch
Hardware power on/off switch design

Grounding Port
Metal case design supports surge grounding and grounding port.

Surge Protection
Supports 6kV surge protection on RJ45 port

ESD Protection
Air : 15KV , Contact : 8KV

Media Access Protocol
CSMA / CD

Network Media
10BASE –T: UTP Cat. 3 or up,
100BASE-TX: UTP Cat. 5 or up,
1000BASE-T: UTP Cat. 5 or up
10GBASE-T: UTP Cat. 6 or up

Transmission Method
Store and Forward

MAC Address Table
16K

Built-in Buffer
12Mb

Jumbo Frame
10K

Data Transfer Rate
10/100/1000Mbps (Half-duplex)
20/200/2000Mbps (Full-duplex)
10/20Gbps (Full-duplex)

Auto MDI/MDIX	
Yes	

LED Indicators	
Per port : Link/Activity Status	x24
Per port : 1000M/Gigabit Status	x24
10G SFP+: Link/Activity Status	x4
10G SFP+ Speed: 10G Status	x4
Per Unit: PWR	x1

Internal Bus Speed/Exchange Rate	
128Gbps/ 95.24Mpps	

Switch Specifications

Link Aggregation
IEEE 802.3ad LACP Link Aggregation Supported

Port Mirror
Supported

Quality of Service (QoS)
Supports IEEE 802.1p QoS, Port-based QoS

Bandwidth Control
Supported

UniDirectional Link Detection (UDLD)
Supported

Spanning Tree Protocol (STP)
IEEE 802.1D Spanning Tree Protocol (STP)
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)

IGMP Snooping
Supports v1, v2, v3 and MVR

ACL Security Management
Supports IPv4 / IPv6 and MAC management

VLAN
IEEE 802.1Q Tagging VLAN , Port-Based ,Tag based VLAN

Virtual Network Management VLAN
Supports Voice VLAN / MAC VLAN / Surveillance VLAN / Protocol VLAN and GVRP

Port Security Management
Supports Broadcast / multicast / unknown unicast storm control

Authentication Security Protocol
Supports RADIUS / TACACS+ and AAA

DHCP Security Detection
Supports DHCP Snooping / DHCP Option 82/ Option82 Circuit ID

IPv6 Management Function
Supports IPv6 Internet Protocol, IPv6 Auto-configuration mechanism and DHCPv6 Client

Remote Network Monitoring (RMON)
Supported

SNMP
Supports SNMP v1/v2c/v3

SNTP Time Server
Supported

Ethernet Ring Protection Switching (ERPS)
Supported

L3/Static Route
IPv4/IPv6 Static Route supported

L3/ Address Resolution Protocol (ARP)
Support ARP advanced setting

L3/DHCP Server/ DNS Server
IPv4 and IPv6 DHCP Server / DNS Server Supported

L3/ Routing Information Protocol (RIP)
Supports RIPv2

L3/ Open Shortest Path First (OSPF)
Supports OSPFv2

L3/Virtual Router Redundancy Protocol (VRRP)
Supports VRRPv2

Environmental & Mechanical Characteristics

Power Type
Power cord: Internal Power supply

Power Consumption
50 Watt

Power Requirements
AC 100~240VAC, 50-60Hz Auto-sensing

Operating Temperature
0° to 50° C

Storage Temperature
-40° to 70° C

Operating Humidity
10% to 90% non-condensing

Storage Humidity
10% to 90% non-condensing

Dimensions (W x D x H)
440 x 280 x 44 mm

Unit Weight
3.4kg

Production Location
TW

Certifications
FCC, CE, RoHS-Compliant

Package Contents

Contents	
CS-34816XG Main Unit	x1
Power Cord	x1
Console Cable	x1
19" Rack Mount Brackets	x1
Warranty Card	x1

SFP / SFP+ / RJ45 Copper Transceiver Module

1.25Gbps/Gigabit SFP/RJ45 Series

Model No.	Photo	Description	Compatible Switch
SRJ-GT		1000BASE-T SFP Copper RJ45 Transceiver 100m	CS-1224G CS-2424G CS-34816XG CS-2208G-8P CS-2424G-24P CS-3416G-16P CS-3424G-24P
SLC-GSXM		1.25Gbps SFP SX 850nm 550m LC Multi-Mode DDM	
SLC-GLXS10		1.25Gbps SFP LX 1310nm 10KM LC Single-Mode DDM	

10Gbps SFP+/RJ45 Series

Model No.	Photo	Description	Compatible Switch
SRJ-10GT		10GBASE-T SFP+ Copper RJ45 Transceiver 30m	CS-2648XG CS-34816XG CS-2648XG-48P
SLC-10GSRM		10GBASE-SR SFP+ 850nm 300m LC Multi-Mode DDM	
SLC-10GLRS10		10GBASE-LR SFP+ 1310nm 10KM LC Single-Mode DDM	
AOC-10G01		1M 10GBASE-T SFP+ to SFP+ Active Optical Cables Cable	